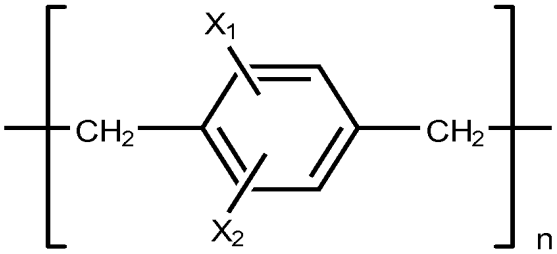
Claims

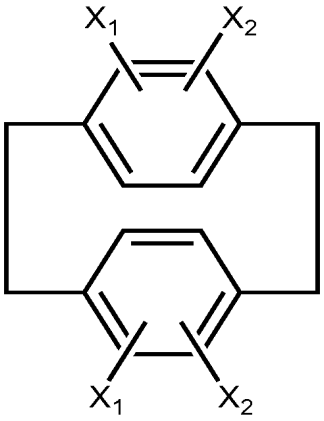
1. A method for improving the heat stability of polyparaxylylene and a derivative film thereof wherein when the polyparaxylylene or the derivative film thereof represented by a below-described general formula 1 is formed by a chemical vapor deposition method, an amino-(2.2)-paracyclophane compound represented by a below-described general formula 3 is mixed in a (2.2)-paracyclophane compound represented by a below-described general formula 2 to form a film.

General formula 1



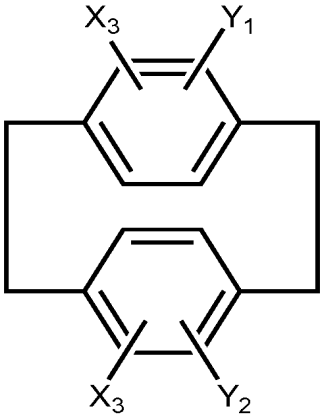
(In the formula 1, X_1 and X_2 designate hydrogen, lower alkyl or halogen. X_1 and X_2 may be the same or different. n represents a degree of polymerization.)

General formula 2



(In the formula 2, X_1 and X_2 have the same meanings as those of the formula 1.)

General formula 3



(In the formula 3, X_3 designates hydrogen or a lower alkyl group. Y_1 and Y_2 designate hydrogen or an amino group and both Y_1 and Y_2 are not hydrogens at the same time.)

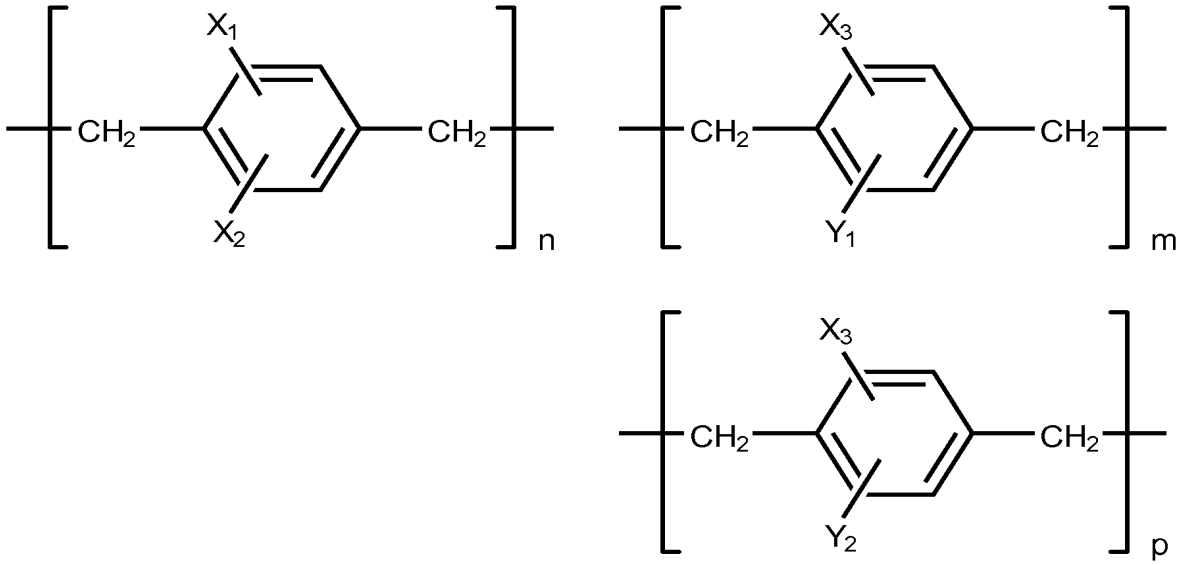
2. The method for improving the heat stability of polyparaxylylene and a derivative film thereof according to claim 1, wherein the polyparaxylylene and the derivative film thereof is a film of polyparaxylylene (in the general formula 1, X_1

and X_2 = hydrogen), polymonochloroparaxylylene (in the general formula 1, X_1 = hydrogen and X_2 = chlorine) or polydichloroparaxylylene (in the general formula 1, X_1 and X_2 = chlorine).

3. The method for improving the heat stability of polyparaxylylene and a derivative film thereof according to claim 1 or 2, wherein the amino-(2.2)-paracyclophane compound is a monoamino-(2.2)-paracyclophane (in the general formula 3, Y_1 = hydrogen and Y_2 = amino group) or a diamino-(2.2)-paracyclophane (in the general formula 3, Y_1 and Y_2 = amino group).

4. A polyparaxylylene derivative represented by a below-described general formula 4.

General formula 4



(In the formula 4, X_1 and X_2 designate hydrogen, lower alkyl or halogen. X_1 and X_2 may be the same or different. X_3 designates hydrogen or a lower alkyl group. Y_1 and Y_2 designate hydrogen or an amino group and both Y_1 and Y_2 are not hydrogens at the same time. n, m and p designate a degree of polymerization.)

5. The polyparaxylylene derivative according to claim 4, wherein a thin film is formed.